What is claimed is:

1. System for adjusting signal power levels at an input to a selected component in a network element that forms part of an optical network, wherein the network element includes one or more circuit cards that define a signal path to the selected component, the system comprising:

a variable optical attenuator (VOA) located in the signal path to the selected component, the VOA includes logic to receive an input signal and produce an attenuated output signal that is transmitted over the signal path, and wherein the VOA also includes control logic to receive control parameters used to set a VOA attenuation factor;

a power level detector coupled to the signal path at the input of the selected component to detect a power level value, and wherein the power level detector includes logic to output the power level value;

power parameters associated with the one or more circuit cards that define the signal path, the power parameters describe loss characteristics of the signal path through each of the one or more circuit cards;

a user display for displaying information to a user;

a user input device for receiving input from a user; and

a processing system coupled to the display, the input device, the power detector, the VOA, and the one or more circuit cards, the processing system includes:

logic to obtain the power parameters associated with the one or more circuit cards;

logic to receive the power level value output from the power detector;

logic to display on the user display calculated power parameters and actual power parameters associated with the signal path;

logic to receive a user input from the user input device, wherein the user input indicates a selected power level; and

logic to form the control parameters that are transmitted to the VOA to adjust the VOA attenuation factor, wherein the control parameters are based on the selected power level, and wherein when the VOA attenuation factor is adjusted, a

selected input power occurs at the input of the selected component.

2. The system of claim 1, wherein the selected component is an optical receiver card.

3. The system of claim 1, wherein the power parameters are associated with each of the one or more circuit cards and are stored at that respective circuit card.

4. The system of claim 1, further comprising a local network that is coupled to the one or more circuit cards and the processing system.

5. The system of claim 4, wherein the local network is a local Ethernet network.

6. The system of claim 1, wherein the processing system is coupled directly to the power detector, the VOA, and the one or more circuit cards.

7. The system of claim 1, wherein the processing system is coupled to the power detector, the VOA, and the one or more circuit cards via a network signaling channel.

8. A method for adjusting signal power levels at an input to a selected component in a network element that forms part of an optical network, wherein the network element includes one or more circuit cards that define a signal path to the selected component, and the signal path includes at least one VOA, the method comprising steps of:

computing calculated power parameters for the signal path;

obtaining measured power parameters at the input to the selected component;

displaying the calculated and measured power parameters on a user display;

receiving a user input; and

adjusting an attenuation factor of the at least one VOA, wherein the adjustment is based on the received user input, and wherein when the attenuation factor is adjusted, a selected input power is provided at the input to the selected circuit card.

9. The method of claim 8, wherein the selected component is an optical

receiver card.

10. The method of claim 8, wherein the step of computing calculated power parameters includes a step of obtaining loss parameters associated with the one or more circuit cards.

11. The method of claim 10, wherein the step of computing calculated power parameters includes a step of obtaining the loss parameters associated with the one or more circuit cards via a local network that is coupled to the circuit cards.

12. The method of claim 11, wherein the step of computing calculated power parameters includes a step of obtaining the loss parameters associated with the one or more circuit cards via a local network that is coupled to the circuit cards, wherein the local network is an Ethernet network.

13. The method of claim 8, wherein the step of obtaining the measured power parameters is a step of obtaining the measured power parameters at the input to the selected component by coupling directly to the network element.

14. The method of claim 8, wherein the step of obtaining the measured power parameters is a step of obtaining the measured power parameters at the input to the selected component via a network signaling channel.

15. The method of claim 8, further comprising a step of repeating the steps of obtaining and displaying after the step of adjusting.

16. The method of claim 8, wherein the step of obtaining is a step of obtaining measured power parameters at the input to a plurality of circuit cards including the selected component.

17. The method of claim 16, wherein the step of adjusting is a step of adjusting an attenuation factor of the at least one VOA, wherein the adjustment is based on the received user input, and wherein when the attenuation factor is adjusted, a selected input power is provided at the input to one of the plurality of circuit cards.

18. System for adjusting signal power levels at an input to a selected component in a network element that forms part of an optical network, wherein the network element includes one or more circuit cards that define a signal path to the selected component, the system comprising:

a variable optical attenuator (VOA) located in the signal path to the selected component, the VOA includes logic to receive an input signal and produce an attenuated output signal that is transmitted over the signal path, and wherein the VOA also includes control logic to receive control parameters used to set a VOA attenuation factor;

a power level detector coupled to the signal path at the input of the selected component to detect a power level value;

a user interface; and

a processing system coupled to the VOA, the power level detector, and the user interface, wherein the processing system comprises:

logic to determine a calculated loss for the signal path and output the calculated loss and the power level value to a user via the user interface; and

logic to create the control parameters that are transmitted to the VOA to adjust the VOA attenuation factor based on a user input received via the user interface, wherein the power level at the input to the selected component is adjusted.

19. The system of claim 18 further comprising power parameters associated with the one or more circuit cards that define the signal path, the power parameters describe loss characteristics of the signal path through each of the one or more circuit cards.

20. The system of claim 19, wherein the user interface comprises:

a user display for displaying information to a user; and

a user input device for receiving input from a user.

21. The system of claim 20, wherein the logic to determine the calculated loss comprises:

logic to obtain the power parameters associated with the one or more circuit cards to determine the calculated loss associated with the signal path;

logic to receive the power level value output from the power detector; and

logic to display on the user display the calculated loss and the power level value.

22. The system of claim 21, wherein the selected component is an optical receiver card.

23. The system of claim 21, wherein the power parameters are associated with each of the one or more circuit cards and are stored at that respective circuit card.

24. The system of claim 21, further comprising a local network that is coupled to the one or more circuit cards and the processing system and wherein the processing system obtains the power parameters via the local network.

25. The system of claim 24, wherein the local network is a local Ethernet network.

26. The system of claim 24, wherein the processing system is coupled directly to the local network.

27. The system of claim 24, wherein the processing system is at a remote location and is coupled to the local network via a network signaling channel.

28. The system of claim 27, wherein the power parameters are stored at the remote location.

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